Title (en)

STEEL SHEET

Title (de)

STAHLBLECH

Title (fr)

TÔLE D'ACIER

Publication

EP 4026922 A4 20220713 (EN)

Application

EP 20861319 A 20200903

Priority

- JP 2019160683 A 20190903
- JP 2020033489 W 20200903

Abstract (en)

[origin: EP4026922A1] Provided are a steel sheet having a predetermined chemical composition and having the following steel structure, and a method of manufacturing the steel sheet.(1) In area ratio%, ferrite: 0 to 5%, martensite: 90 to 100%, a ratio of tempered martensite to total martensite: 80 to 100%, and retained austenite: 0.5 to 6.0% are contained.(2) The number density of inclusions satisfying the maximum diameter ≥ 3 μm is 40 inclusions/mm² or less.(3)When the number density of the inclusions satisfying the maximum diameter ≥ 3 μm in each section is calculated, the number density in the section where the number density of inclusions is in the top 10% is 80 inclusions/mm² or less.(4) Formula (A) is satisfied. Vγ′/Vγ≥0.1 Vγ: Initial retained austenite, Vγ': Retained austenite after deep cooling at -196°C(5) The tensile strength is 1470 MPa or more.

IPC 8 full level

C21D 9/46 (2006.01); **C21D 8/02** (2006.01); **C22C 38/00** (2006.01); **C22C 38/02** (2006.01); **C22C 38/04** (2006.01); **C22C 38/14** (2006.01); **C22C 38/60** (2006.01); B22D 11/00 (2006.01); B22D 11/043 (2006.01); B22D 11/055 (2006.01); B22D 11/06 (2006.01); C21D 1/19 (2006.01); C21D 1/22 (2006.01); C21D 1/25 (2006.01); C21D 1/76 (2006.01)

CPC (source: EP KR US)

B22D 11/225 (2013.01 - EP); **C21D 8/0205** (2013.01 - US); **C21D 8/0226** (2013.01 - US); **C21D 8/0236** (2013.01 - US); **C21D 8/0263** (2013.01 - US); **C21D 9/46** (2013.01 - KR US); **C22C 38/00** (2013.01 - EP); **C22C 38/001** (2013.01 - KR US); **C22C 38/002** (2013.01 - US); **C22C 38/005** (2013.01 - US); **C22C 38/008** (2013.01 - US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - KR US); **C22C 38/08** (2013.01 - US); **C22C 38/10** (2013.01 - US); **C22C 38/12** (2013.01 - US); **C22C 38/14** (2013.01 - EP US); **C22C 38/16** (2013.01 - US); **C22C 38/42** (2013.01 - KR US); **C22C 38/44** (2013.01 - KR US); **C22C 38/46** (2013.01 - KR); **C22C 38/48** (2013.01 - KR US); **C22C 38/50** (2013.01 - KR US); **C22C 38/52** (2013.01 - KR); **C22C 38/54** (2013.01 - US); **C22C 38/58** (2013.01 - KR US); **C22C 38/60** (2013.01 - EP US); C21D 1/19 (2013.01 - EP); C21D 1/22 (2013.01 - EP); C21D 1/25 (2013.01 - EP); C21D 1/76 (2013.01 - EP); C21D 8/0205 (2013.01 - EP); C21D 8/021 (2013.01 - EP); C21D 8/0226 (2013.01 - EP); C21D 8/0247 (2013.01 - EP); C21D 9/46 (2013.01 - EP); C21D 2211/001 (2013.01 - EP US); C21D 2211/004 (2013.01 - EP); C21D 2211/005 (2013.01 - US); C21D 2211/008 (2013.01 - EP KR US)

Citation (search report)

- [I] JP 6295893 B2 20180320
- [A] JP 4008391 B2 20071114
- [A] US 2012009434 A1 20120112 - HATA HIDEO [JP], et al
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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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BA ME

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